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EXAMINER	
ERB, NATHAN	

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3628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/736,268	CAMPAGNA ET AL.	
	Examiner	Art Unit	
	NATHAN ERB	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☒ Claim(s) *1-17 and 19-25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20060504*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-17 and 19-25 are objected to because of the following informalities:

a. In the last line of claim 1, please insert the word --to-- after the word “robust.”

b. In the first line of each of claims 2-14, 16-17, and 19-25, please replace the word "A" with --The--.

c. In the first line of claim 3, please remove the period after the word “piece.”

d. In the seventh line of claim 10, please remove the word “simulate.”

e. In the eighteenth line of claim 15, please replace the semicolon with a colon.

f. In the seventh line of claim 17, please remove the word “simulate.”

g. In the seventh line of claim 23, please remove the word "simulate."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 18-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 18-25 are written in “single means claim” format since they recite only one element to do all the functions recited. The claims are not written in “means-plus-function” language, however, in Fiers v. Revel, (CAFC) 25

USPQ2d 1601, 1606 (1/19/1993, the CAFC affirmed a rejection under 35 USC 112 of a claim reciting a single element that did not literally use "means-plus-function" language. Claims 18-25 are drawn to any of the listed devices, regardless of construct, that perform the function recited. This parallels the fact situation in Fiers wherein "a DNA" and a result was recited. The CAFC stated in Fiers at 1606 "Claiming all DNA's that achieve a result without defining what means will do so is not in compliance with the description requirement; it is an attempt to preempt the future before it has arrived". See also Ex parte Maizel, (BdPatApp&Int) 27 USPQ2d 1662, 1665 and Ex parte Kung, (BdPatApp&Int) 17 USPQ2d 1545, 1547 (1/30/1989) where the claims at issue were rejected for being analogous to single means claims even though "means" was not literally used. Thus, claims 18-25 yield "devices" that achieve a result without defining what will do so.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 24-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per **Claims 24-25**, each of these claims is directed to a method, yet both claims directly incorporate a system claim through dependency. It is unclear if these claims are method claims or system claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4, 6-8, 10-12, and 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitehouse, U.S. Patent No. 6,005,945, in view of Ryan, Jr. et al., U.S. Patent No. 5,871,288, in further view of Pintsov et al., U.S. Patent No. 6,385,504 B1, in further view of Van Haagen et al., U.S. Patent No. 5,675,137.

As per **Claims 1 and 18**, Whitehouse discloses:

- a method (or programmable data processing system) for generating a characterizing information descriptor for a selected block of printed material, where said printed material is to be scanned from an object and compared with said characterizing information descriptor at a location distant from where said block is printed (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35);

- printing said block on an object (column 22, lines 30-35; column 26, lines 40-55).

Whitehouse fails to disclose selecting an indicium, tested and being so determined to be the optimal one to be used. Ryan, Jr. et al. discloses selecting an indicium, tested and being so determined to be the optimal one to be used (Figure 3; column 2, lines 20-30; column 2, lines 46-56; column 4, lines 1-31). Therefore, the prior

art included each of the above elements claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is simply applying an iterative method to a method of generating self-validating postal indicia such that an indicium with optimal characteristics is used). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

Whitehouse and Ryan, Jr. et al. fail to disclose wherein various indicia represent various characterizing algorithms. Pintsov et al. discloses wherein various indicia represent various characterizing algorithms (column 9, line 51, through column 10, line 5). Therefore, the prior art included each of the above elements claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (Pintsov et al. just sets out that there is more than one possible way of linking an address to an indicium, providing added choices for an indicium). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the

function of increasing the number of possible indicium choices). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

Whitehouse, Ryan, Jr. et al., and Pintsov et al. fail to disclose applying each algorithm from a predetermined set of characterizing algorithms to generate a plurality of corresponding first characterizing information descriptors; determining estimates of robustness, with respect to said information being represented, for each of said algorithms in said set to determine which of said characterizing algorithms is most robust; and wherein an optimal descriptor is a descriptor generated by one of the algorithms and being so determined to be most robust. Van Haagen et al. discloses applying each algorithm from a predetermined set of characterizing algorithms to generate a plurality of corresponding first characterizing information descriptors (column 1, line 24, through column 2, line 26; columns 311-316); determining estimates of robustness, with respect to said information being represented, for each of said algorithms in said set to determine which of said characterizing algorithms is most robust (column 1, line 24, through column 2, line 26; columns 311-324); and wherein an optimal descriptor is a descriptor generated by one of the algorithms and being so determined to be most robust (column 1, line 24, through column 2, line 26; columns 311-324). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined

the elements as claimed by known methods (this is simply specifying a particular method of determining which indicium is optimal). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium is optimal). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claims 2 and 19**, Whitehouse, Ryan, Jr. et al., and Pintsov et al. fail to disclose filtering said pristine digital image of said block of printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes; applying each algorithm from said predetermined set of characterizing algorithms to said filtered image to generate a plurality of corresponding second characterizing information descriptors for said filtered digital image; and for each algorithm from said predetermined set of characterizing algorithms, comparing corresponding said first and said second descriptors to determine which of said characterizing algorithms is most robust. Van Haagen et al. further discloses filtering said pristine digital image of said block of printed

material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes (column 1, line 24, through column 2, line 26; columns 311-316); applying each algorithm from said predetermined set of characterizing algorithms to said filtered image to generate a plurality of corresponding second characterizing information descriptors for said filtered digital image (column 1, line 24, through column 2, line 26; columns 311-324); and for each algorithm from said predetermined set of characterizing algorithms, comparing corresponding said first and said second descriptors to determine which of said characterizing algorithms is most robust (column 1, line 24, through column 2, line 26; columns 311-324). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is just getting more specific about how to determine optimum robustness). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium is optimal). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claims 3 and 20**, Whitehouse further discloses where said object is a mail piece and said block of printed material represents an address (column 22, lines 30-35; column 26, lines 40-55).

As per **Claim 4**, Whitehouse further discloses where said descriptor is comprised in an indicium printed on said mail piece (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35); whereby said descriptor can be recovered from said indicium for use at said remote location (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35).

As per **Claims 6 and 21**, Whitehouse, Ryan, Jr. et al., and Pintsov et al. fails to disclose where said selected descriptor is one of said second descriptors. Van Haagen et al. further discloses where said selected descriptor is one of said second descriptors (column 1, line 24, through column 2, line 26; columns 311-324). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is just using the bar code format that has been determined to be optimal). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing

the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium is optimal). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claims 7 and 22**, Whitehouse further discloses where said object is a mail piece and said block of printed material represents an address (column 22, lines 30-35; column 26, lines 40-55).

As per **Claim 8**, Whitehouse further discloses where said descriptor is comprised in an indicium printed on said mail piece (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35); whereby said descriptor can be recovered from said indicium for use at said remote location (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35).

As per **Claims 10 and 23**, Whitehouse, Ryan, Jr. et al., and Pintsov et al. fail to disclose filtering said pristine digital image of said block of printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes; further filtering said filtered image with one or more defacing filters, said defacing filters

simulating simulate blots, smudges, failure of print elements or scanner sensors, or other, similar occasional events which can not easily be incorporated into said print/scan filter to create one or more defaced images; applying each algorithm from said predetermined set of characterizing algorithms to said filtered image and to said one or more defaced images to generate a plurality of corresponding second characterizing information descriptors for said filtered digital image and one or more pluralities of defaced image descriptors corresponding to each of said one or more defaced images; and for each algorithm from said predetermined set of characterizing algorithms, comparing corresponding first characterizing information descriptors with corresponding second characterizing information descriptors and with each of said one or more corresponding defaced image descriptors to determine which of said characterizing algorithms is most robust. Van Haagen et al. further discloses filtering said pristine digital image of said block of printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes (column 1, line 24, through column 2, line 26; columns 311-316); further filtering said filtered image with one or more defacing filters, said defacing filters simulating simulate blots, smudges, failure of print elements or scanner sensors, or other, similar occasional events which can not easily be incorporated into said print/scan filter to create one or more defaced images (column 1, line 24, through column 2, line 26; columns 311-316); applying each algorithm from said predetermined set of characterizing algorithms to said filtered image and to said one or more defaced images to generate a plurality of corresponding

second characterizing information descriptors for said filtered digital image and one or more pluralities of defaced image descriptors corresponding to each of said one or more defaced images (column 1, line 24, through column 2, line 26; columns 311-324); and for each algorithm from said predetermined set of characterizing algorithms, comparing corresponding first characterizing information descriptors with corresponding second characterizing information descriptors and with each of said one or more corresponding defaced image descriptors to determine which of said characterizing algorithms is most robust (column 1, line 24, through column 2, line 26; columns 311-324). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is just getting more specific about how to determine optimum robustness). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium is optimal). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claims 11 and 24**, Whitehouse further discloses where said object is a mail piece and said block of printed material represents an address (column 22, lines 30-35; column 26, lines 40-55).

As per **Claim 12**, Whitehouse further discloses where said descriptor is comprised in an indicium printed on said mail piece (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35); whereby said descriptor can be recovered from said indicium for use at said remote location (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35).

As per **Claims 14 and 25**, Whitehouse, Ryan, Jr. et al., and Pintsov et al. fails to disclose where said selected descriptor is one of said second descriptors. Van Haagen et al. further discloses where said selected descriptor is one of said second descriptors (column 1, line 24, through column 2, line 26; columns 311-324). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is just using the bar code format that has been determined to be optimal). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still

perform the function of determining which indicium is optimal). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claim 15**, Whitehouse discloses:

- a secure indicia printing system for generating and printing an indicium on an object, said object having other material printed thereon (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35; column 26, lines 40-55);

- a printer for printing said indicium (column 22, lines 30-35; column 26, lines 40-55);

- a meter, said meter to generate indicium according to a particular descriptor, and having a communications link for receiving other information from another information source, and communicating with said printer (column 6, lines 46-65; column 14, lines 37-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35; column 26, lines 40-55);

- cryptographically authenticating said descriptor and other information (column 16, lines 19-67);

- generating said indicium to be representative of said cryptographically authenticated descriptor and information (column 6, lines 46-65; column 14, line 66,

through column 15, line 17; column 16, lines 19-67; column 22, lines 30-35; column 26, lines 40-55);

- controlling said printer to print said indicium on said object (column 22, lines 30-35; column 26, lines 40-55);

- whereby said object's relationship to said indicium can be verified by regenerating said first characterizing information descriptor from said other printed material and comparing said regenerated descriptor with said descriptor recovered from said indicium, and copies of said indicium cannot easily be used without detection on other objects which do not include said other printed material (column 6, lines 46-65; column 14, line 66, through column 15, line 17; column 22, lines 30-35).

Whitehouse fails to disclose selecting an indicium, tested and being so determined to be the optimal one to be used. Ryan, Jr. et al. discloses selecting an indicium, tested and being so determined to be the optimal one to be used (Figure 3; column 2, lines 20-30; column 2, lines 46-56; column 4, lines 1-31). Therefore, the prior art included each of the above elements claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is simply applying an iterative method to a method of generating self-validating postal indicia such that an indicium with optimal characteristics is used). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability). One of ordinary skill in the art would have

recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

Whitehouse and Ryan, Jr. et al. fail to disclose wherein various indicia represent various characterizing algorithms. Pintsov et al. discloses wherein various indicia represent various characterizing algorithms (column 9, line 51, through column 10, line 5). Therefore, the prior art included each of the above elements claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (Pintsov et al. just sets out that there is more than one possible way of linking an address to an indicium, providing added choices for an indicium). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

Whitehouse, Ryan, Jr. et al., and Pintsov et al. fail to disclose a processor for receiving a pristine digital image of said other printed material, and for processing said image to abstract characterizing information descriptive of aspects of said image from

said image; applying each algorithm from a predetermined set of characterizing algorithms to generate a plurality of corresponding first characterizing information descriptors; determining estimates of robustness, with respect to said information being represented, for each of said algorithms in said set to determine which of said characterizing algorithms is most robust; wherein an optimal descriptor is a descriptor generated by one of the algorithms and being so determined to be most robust; and output said selected descriptor. Van Haagen et al. discloses a processor for receiving a pristine digital image of said other printed material, and for processing said image to abstract characterizing information descriptive of aspects of said image from said image (column 1, line 24, through column 2, line 26; columns 311-324); applying each algorithm from a predetermined set of characterizing algorithms to generate a plurality of corresponding first characterizing information descriptors (column 1, line 24, through column 2, line 26; columns 311-316); determining estimates of robustness, with respect to said information being represented, for each of said algorithms in said set to determine which of said characterizing algorithms is most robust (column 1, line 24, through column 2, line 26; columns 311-324); wherein an optimal descriptor is a descriptor generated by one of the algorithms and being so determined to be most robust (column 1, line 24, through column 2, line 26; columns 311-324); and output said selected descriptor (column 1, line 24, through column 2, line 26; columns 311-324). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is simply specifying a particular method of determining

which indicium is optimal). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium is optimal). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claim 16**, Whitehouse, Ryan, Jr. et al., and Pintsov et al. fail to disclose wherein said processor is programmed for filtering said pristine digital image of said block of printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes; applying each algorithm from said predetermined set of characterizing algorithms to said filtered image to generate a plurality of corresponding second characterizing information descriptors for said filtered digital image; and for each algorithm from said predetermined set of characterizing algorithms, comparing corresponding said first and said second descriptors to determine which of said characterizing algorithms is most robust. Van Haagen et al. further discloses wherein said processor is programmed for filtering said pristine digital image of said block of

printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes (column 1, line 24, through column 2, line 26; columns 311-316); applying each algorithm from said predetermined set of characterizing algorithms to said filtered image to generate a plurality of corresponding second characterizing information descriptors for said filtered digital image (column 1, line 24, through column 2, line 26; columns 311-324); and for each algorithm from said predetermined set of characterizing algorithms, comparing corresponding said first and said second descriptors to determine which of said characterizing algorithms is most robust (column 1, line 24, through column 2, line 26; columns 311-324). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is just getting more specific about how to determine optimum robustness). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium is optimal). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claim 17**, Whitehouse, Ryan, Jr. et al., and Pintsov et al. fail to disclose wherein said processor is programmed for filtering said pristine digital image of said block of printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes; further filtering said filtered image with one or more defacing filters, said defacing filters simulating simulate blots, smudges, failure of print elements or scanner sensors, or other, similar occasional events which can not easily be incorporated into said print/scan filter to create one or more defaced images; applying each algorithm from said predetermined set of characterizing algorithms to said filtered image and to said one or more defaced images to generate a plurality of corresponding second characterizing information descriptors for said filtered digital image and one or more pluralities of defaced image descriptors corresponding to each of said one or more defaced images; and for each algorithm from said predetermined set of characterizing algorithms, comparing corresponding first characterizing information descriptors with corresponding second characterizing information descriptors and with each of said one or more defaced image descriptors to determine which of said characterizing algorithms is most robust. Van Haagen et al. further discloses wherein said processor is programmed for filtering said pristine digital image of said block of printed material with a print/scan filter to create a filtered image, said print/scan filter simulating the expected transformation of said pristine image by printing and scanning processes (column 1, line 24, through column 2, line 26; columns 311-316); further filtering said filtered image with

one or more defacing filters, said defacing filters simulating simulate blots, smudges, failure of print elements or scanner sensors, or other, similar occasional events which can not easily be incorporated into said print/scan filter to create one or more defaced images (column 1, line 24, through column 2, line 26; columns 311-316); applying each algorithm from said predetermined set of characterizing algorithms to said filtered image and to said one or more defaced images to generate a plurality of corresponding second characterizing information descriptors for said filtered digital image and one or more pluralities of defaced image descriptors corresponding to each of said one or more defaced images (column 1, line 24, through column 2, line 26; columns 311-324); and for each algorithm from said predetermined set of characterizing algorithms, comparing corresponding first characterizing information descriptors with corresponding second characterizing information descriptors and with each of said one or more defaced image descriptors to determine which of said characterizing algorithms is most robust (column 1, line 24, through column 2, line 26; columns 311-324). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is just getting more specific about how to determine optimum robustness). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still

perform the function of determining which indicium is optimal). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

8. Claims 5, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitehouse in view of Ryan, Jr. et al. in further view of Pintsov et al. in further view of Van Haagen et al. in further view of Ulvr et al., U.S. Patent No. 5,602,382.

As per **Claim 5**, Whitehouse, Ryan, Jr. et al., Pintsov et al., and Van Haagen et al. fail to disclose where said indicium further comprises information identifying said algorithm so determined. Ulvr et al. discloses where said indicium further comprises information identifying said algorithm so determined (abstract). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is simply specifying a particular field to include in an indicium, which is already used to store various data). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium

is optimal; Ulvr et al.'s element would still perform the function of directing how the indicium should be interpreted). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claim 9**, Whitehouse, Ryan, Jr. et al., Pintsov et al., and Van Haagen et al. fail to disclose where said indicium further comprises information identifying said algorithm so determined. Ulvr et al. discloses where said indicium further comprises information identifying said algorithm so determined (abstract). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is simply specifying a particular field to include in an indicium, which is already used to store various data). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium is optimal; Ulvr et al.'s element would still perform the function of directing how the indicium should be interpreted). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements

interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

As per **Claim 13**, Whitehouse, Ryan, Jr. et al., Pintsov et al., and Van Haagen et al. fail to disclose where said indicium further comprises information identifying said algorithm so determined. Ulvr et al. discloses where said indicium further comprises information identifying said algorithm so determined (abstract). Therefore, the prior art included each element claimed although not necessarily in a single reference. One of ordinary skill in the art could have combined the elements as claimed by known methods (this is simply specifying a particular field to include in an indicium, which is already used to store various data). In combination, each element merely would have performed the same function as it did separately (Whitehouse's elements still provide the base concept of generating self-validating indicia; Ryan, Jr. et al.'s elements still perform the function of optimizing indicium readability; Pintsov et al.'s element would still provide the function of increasing the number of possible indicium choices; Van Haagen et al.'s elements would still perform the function of determining which indicium is optimal; Ulvr et al.'s element would still perform the function of directing how the indicium should be interpreted). One of ordinary skill in the art would have recognized that the results of the combination were predictable (none of the combined elements interfere with the ability to use each element; there are no surprise effects from the combination). Thus, the combination would have been obvious.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1, 15, and 18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 12 of copending Application No. 10/736,077. Although the conflicting claims are not identical, they are not patentably distinct from each other because the same elements can be found in both sets of independent claims (for example, characterizing information, descriptors, estimating robustness, etc.). While application no. 10/736,077 refers to a combination of descriptors as opposed to selecting a single best descriptor, this is not a non-obvious difference because a single set of descriptors can also be characterized as simply a single descriptor. Application no. 10/736,077 also refers to "determining uniqueness of said indicia" using scanned information from the mailpiece. This is an

obvious difference because there are various references in the art which attempt to embed unique identifying information in indicia; therefore, determining whether indicia are unique is closely connected to those references.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

11. **Examiner's Note:** Examiner has cited particular portions of the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that the applicant, in preparing the responses, fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN ERB whose telephone number is (571) 272-7606. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571) 272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NATHAN ERB
Examiner
Art Unit 3628

Nhe

/JOHN W HAYES/
Supervisory Patent Examiner, Art Unit 3628